

Appendix A: Terms of Reference

COMPLETED ACQUISITION BY BOTTOMLINE TECHNOLOGIES (DE), INC OF EXPERIAN LIMITED'S EXPERIAN PAYMENTS GATEWAY BUSINESS AND RELATED ASSETS

1. In exercise of its duty under section 22(1) of the Enterprise Act 2002 (the **Act**) the Competition and Markets Authority (**CMA**) believes that it is or may be the case that:
 - (a) a relevant merger situation has been created, in that:
 - (i) enterprises carried on by Bottomline Technologies (de), Inc. have ceased to be distinct from the enterprise consisting of the Experian Payments Gateway business carried on by Experian Limited; and
 - (ii) the condition specified in section 23(2)(b) of the Act is satisfied; and
 - (b) the creation of that situation has resulted, or may be expected to result, in a substantial lessening of competition within a market or markets in the United Kingdom for goods or services, including: (i) the supply of payments software for Bacs submissions via Bacstel-IP in the UK; and (ii) the supply of payments software for Faster Payments Service Direct Corporate Access submissions via Secure-IP in the UK.
2. Therefore, in exercise of its duty under section 22(1) of the Act, the CMA hereby makes a reference to its chair for the constitution of a group under Schedule 4 to the Enterprise and Regulatory Reform Act 2013 in order that the group may investigate and report, within a period ending on 5 April 2020, on the following questions in accordance with section 35(1) of the Act:
 - (a) whether a relevant merger situation has been created; and
 - (b) if so, whether the creation of that situation has resulted, or may be expected to result, in a substantial lessening of competition within any market or markets in the United Kingdom for goods or services.

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Competition and Markets Authority
21 October 2019

Appendix B: Analysis of customer switching

1. Chapter 8 of the provisional findings report includes assessments of customer switching. This appendix provides methodological and other details of these analyses. It includes:
 - (a) the methodology used by Oxera when undertaking its analysis of the Parties' contract data on behalf of Bottomline; and
 - (b) our methodology when analysing the data obtained from Vocalink.

Contract data methodology

2. Bottomline submitted an analysis of customer switching to the CMA.¹ This analysed the rates of switching between the two Parties, based on their contract data.
3. The analysis calculated the number and proportion of customers switching from:
 - (a) Bottomline to EPG - Bottomline's customer loss data is based on internal records which show where a customer is lost to (to the best of Bottomline's knowledge). The analysis then also matched the customer names in the Bottomline dataset with the names in the EPG customer database in order to identify customers that may have switched between the Parties.²
 - (b) EPG to Bottomline - Bottomline was only able to conduct a matching exercise, as EPG did not record information on where it believed lost customers had switched to.
4. In some cases, it was ambiguous as to whether a switch had occurred or not. For example, the contract data may have indicated a customer left EPG in

¹ The analysis and its methodology was submitted to the CMA on 10 September 2019. In response to follow-up questions raised by the CMA in phase 1, Oxera, under Bottomline's instruction, implemented some adjustments to the methodology and made a further submission following the issues meeting held on 12 September 2019. The methodology was explained by Oxera in a meeting with the CMA phase 2 team held on Tuesday 5 November 2019.

² Matches were identified manually since Bottomline and Experian do not always record exactly the same customer name. If a customer name is substantially different in one dataset compared to the other (for example, a trading name is recorded in one but a (substantially different) legal name in the other), this will not be identified as a switch. After the matching names had been identified, they checked whether there had indeed been a switch between the Parties based on the recorded switching date in each dataset. If the dates align, the event is recorded as a switch.

late 2015 and joined Bottomline in early 2017. In this situation the customer may have used an alternative supplier in the intervening period, or the dates may have been inaccurate.³ Alternatively, there may be some overlap in the switching dates, for example the data may indicate that a customer joined EPG in 2016 but did not leave Bottomline until 2017. In this situation, the customer could have been multi-homing while switching, or have different departments choosing to use different software. These ambiguous matches were included as switches between the Parties.

5. A similar approach was taken towards Bottomline losses. The customer loss data shows that [X] customers were lost to EPG over the period 2014–2018. Although some of these could not be found in the EPG customer database, they have been counted as losses from Bottomline to EPG.

Vocalink data methodology

Overview

6. Vocalink provided the CMA with a dataset consisting of monthly data from January 2014 to October 2019. This data contained the number of Bacs transactions submitted by each Service User Number (SUN)⁴ to Bacs in that month, as well as the software used to submit the transactions.
7. This data allowed us to identify the number of SUNs that have switched away from each of the Parties and, as long as the SUN is still submitting to Bacs directly via Bacstel-IP software or via a bureau, where the SUN has gone.
8. The dataset is organised by SUN and not by company, with each company free to purchase multiple SUNs.⁵ Since we are interested in the number of companies who switched between the Parties and not the number of SUNs that switched, we have had to aggregate the SUNs. We have done this by manually matching the company name fields for those SUNs which have switched away from either EPG or Bottomline.⁶

³ Given the purpose for which Bacs Approved Software is normally used, it is unlikely that a customer would not have needed to use the software in the intervening period.

⁴ A Service User Number is a unique six-digit number used to identify a business paying or receiving money through Bacs.

⁵ Companies may demand additional SUNs in order to maintain accounting separation between separate business units, but this need not be the case.

⁶ We have manually aggregated all single homing SUNs (i.e. a SUN that was using a single piece of submitting software for a period) for all customers switching from EPG or Bottomline. For SUNs which were multi-homing (i.e. using multiple pieces of submitting software regularly) we have manually aggregated SUNs switching away from EPG and from Bottomline to EPG (i.e. we have not manually aggregated multi-homing suns switching from Bottomline to other competitors).

9. There are some limitations to this approach. For example, in instances where two business units within a wider corporate group have different names listed in the Vocalink data, manual aggregation is impossible. Additionally, if a firm took out new SUNs with its new provider and left its old SUNs with its old provider, we will not capture this.
10. The Vocalink data also includes information on the number of transactions each SUN sent via Bacs every month, however, it does not contain any information on how much the SUN spent to process these transactions.
11. As discussed in chapter 8 of our provisional findings, transaction volume is an imperfect proxy for revenue derived by Bacs Approved Software providers, with significant variations in the revenue per transaction across companies. However, since we have no other information to assess the relative size of the customers, we have reported diversion ratios by customers and by volume.

Methodology

12. To carry out the analysis we have used the following methodology:
 - (a) We first looked at switching for those SUNs who have never used more than one software in any given month ('single-homing SUNs').
 - (b) For SUNs using multiple different pieces of software in a given month ('multi-homing SUNs'), we produced an estimate of the switches and manually validated its reliability. More details on this are provided below.
 - (c) In instances where a Bottomline or EPG customer has switched from submitting directly to submitting via an internal bureau⁷ we have not classified these as switches.
 - (d) On the EPG side, we then compared our results with the results of the contract data analysis and identified a few additional switches. These included customers that changed SUNs when switching and were not captured by our analysis.
 - (e) To calculate customer diversion between the Parties and avoid double-counting, we then manually aggregated the following categories of customers:⁸

⁷ For the purposes of our analysis we have classified an internal bureau as a bureau sharing the same name as the company which control/owns the service user number. We note that this will not capture instances where an internal bureau does not have the same name of the controlling company.

⁸ As set out above, in instances where two business units within a wider corporate group have different names listed in the Vocalink data, manual aggregation is impossible.

- (i) all customers switching from EPG;
 - (ii) all single-homing customers switching from Bottomline; and
 - (iii) all multi-homing customers switching from Bottomline to EPG.
- (f) Lastly, to calculate volume diversion we used the annual diverted volumes of any given lost customer in the year of the switch.⁹

13. Below we describe in more detail the methodology used to produce the estimate for multi-homing SUNs (see paragraph 12(b) above).

Estimating switches for multi-homing SUNs

14. For multi-homing SUNs, it was more difficult to assess genuine switches. Therefore, we used the following method to produce an estimate:

(a) [REDACTED].¹⁰

(b) [REDACTED].

15. This method allowed us to more accurately assess these cases. However, we also acknowledge the existence of a few potential limitations associated with this method. In particular:

(a) [REDACTED].

(b) [REDACTED].

Assessing reliability of the methodology used

16. To assess the reliability of the estimate produced through the methodology set out at paragraphs 12 to 15, we manually identified all switches from EPG to all other competitors and all switches from Bottomline to EPG and compared these results with our estimates. We noted that:

(a) All switches identified through the estimation methodology were genuine switches.

(b) A few switches were not captured. These were mostly instances where the overlap / transition period occurred at the start or at the end of the relevant period.

⁹ This means that where a customer having multiple SUNs switches to a different supplier with only few of its SUNs we will only consider the volume processed through the switching SUN.

¹⁰ [REDACTED]

Appendix C: Conduct of Inquiry

1. We published the biographies of the members of the inquiry group conducting the inquiry on 25 October 2019 and we published the administrative timetable for the investigation on our webpage on 15 November 2019.
2. On 14 November 2019 we published an issues statement on our webpage, setting out the areas on which the inquiry would focus.
3. On 21 November 2019, members of the inquiry group, accompanied by staff and Bottomline visited the premises of Hogan Lovells, legal advisers to Bottomline. Bottomline agreed to this instead of a site visit to its premises.
4. We invited a wide range of interested parties to comment on the Merger. We conducted telephone interviews with a number of customers and competitors of the Parties, as well as other interested parties. Evidence was also obtained through written requests. We also used evidence from the CMA's phase 1 investigation into the Merger.
5. We received written evidence from the Parties and a non-confidential version of their response to the phase 1 decision is on the [case page](#). A non-confidential version of their response to the issues statement is also on the case page.
6. In the course of our investigation we sent the Parties a number of working papers.
7. In this case the Inquiry Group reached the view there was not a need to hold a hearing with Bottomline. Bottomline agreed with this view. A hearing with Bottomline did not take place.
8. We would like to thank those who have assisted us in our inquiry to date.

Glossary and list of companies

API	Application programming interface
Bacs	The Bacs payment scheme
Bacs Approved Software	Software for submissions to Bacs via Bacstel-IP and Faster Payments Service Direct Corporate Access submissions via Secure-IP
Bacstel-IP	An online submission channel into the Bacs for submitting, tracking and viewing payment files
Bank Wizard	A verification software owned by Experian which may be used by customers of Software Products to help make sure they are using the right bank account details
CMA	Competition and Markets Authority
Deployed software	Software that is run on a customer's computer or internal server (rather than hosted on the cloud)
EMI	An electronic money institution which is authorised or registered by the FCA either as an authorised payment institution, a small payment institution, or a registered account information service provider
FM DD	Facilities management direct debit
FPS	Faster Payments Service
FPS DCA	Faster Payments Service Direct Corporate Access

Hosted software	Software that is run on the software provider's server (in the cloud) rather than deployed to the customer's computer or internal server
Host-to-host	A secure connection between a customer's ERP software and a Payment Services Provider which permits payment messages to be communicated with a high degree of autonomy subject to the customer's approval workflow and security safeguards
HSM	Hardware security module
Merged Entity	Bottomline and EPG collectively, post-Merger
NPA	New Payments Architecture
The Parties	Bottomline and EPG collectively
Payment Service Provider	An institution which offers payment services to businesses as defined in the Payment Services Regulations 2017
PSD2	The Second Payment Services Directive, namely Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market
Secure-IP	An online submission channel into FPS for submitting, tracking and viewing payment files
SUN	A unique six-digit number used to identify a business paying or receiving money through a Bacs transaction